

REMARKS/ARGUMENTS

Claims 1-18 are pending. Claims 10 and 12-18 are withdrawn pursuant to a previous Restriction Requirement. Claims 1-9 are rejected as anticipated by or in the alternative as obvious over Rockrath (WO 01/12736A1, corresponding to US 6,835,420). Claim 11 is rejected as obvious over the combination of Rockrath and Koniger (WO 00/63015, corresponding to US 6,777,089). Applicants respectfully traverse these *new* rejections.

I. §102(b)/§103(a) over Rockrath

Applicants submit that Rockrath fails to anticipate and/or render obvious the claimed invention for at least the following reasons A through H.

A. The claimed method comprises “laminating a shaped article with a radiation-curable laminated sheet or film, wherein” First, Applicants point out that in order to laminate any shaped article, including oddly shaped articles, the sheet/film must necessarily be flexible. Second, the claimed method refers to a “sheet or film” that is able to be laminated.

In contrast, Rockrath discloses a coating system for application directly onto a substrate (col. 19, lines 33-64). Rockrath does not disclose a “sheet or film” that is able to be laminated. In addition, Rockrath discloses that it is preferred to provide a tacky coating, after partial curing, to a substrate. However, Applicants’ specification explains that the “top layer [of the radiation-curable laminated sheet or film] is resistant to blocking, i.e., it is not tacky” (see page 22, line 27) (see also, claim 1 that recites the “top layer”), and that the “film can be stored without partial curing” (page 22, line 40).

B. The claimed invention recites that “the top layer consists of radiation-curable material” (claim 1) and that “radiation curing of the top layer” occurs (claim 11). In Rockrath, the main curing mechanism is a thermal crosslinking of a binder A with a crosslinker B (col. 4, line 18). The claimed method does not recite such a two-component (i.e., binder and crosslinker) system.

C. The claimed invention recites that “the top layer consists of radiation-curable material which comprises a binder having a glass transition temperature below 20°C and a content of ethylenically unsaturated groups of more than 2 mol/kg of binder” (claim 1). Apparently in light of this claimed limitation, the Office refers to a glass transition temperature (“Tg”) in column 12, lines 1-4 of Rockrath. However, Applicants point out that the Tg referred to by the Office is the Tg of a homopolymer made of monomer (m2) only, and that monomer (m2) is only one out of four constituents (m1) to (m4) that are copolymerized together to form the binder A. Therefore, the Tg referred to by the Office is not the Tg of the binder A of Rockrath and thus cannot be equated to the claimed Tg of the claimed binder. Rockrath is silent on the Tg of the copolymer that is the binder of Rockrath.

D. Assuming *arguendo* that the binder of Rockrath had a Tg below 20°C like that claimed, which it does not, Applicants point out that the binder of Rockrath is a copolymer obtained by radical polymerization, and therefore does not contain any ethylenically unsaturated groups anymore. This is in stark contrast to the claims that recite that the binder has a content of ethylenically unsaturated groups of more than 2 mol/kg of binder.

Furthermore, the Office has also referred to column 6, lines 49-63 of Rockrath in apparent comment on this claimed limitation as well. However, Applicants point out that the 10.5 double bonds per molecule mentioned refers to the polysiloxane macromonomer prior to polymerization, not the binder A of Rockrath (see col. 6, lines 54-63). Also, it should be noted that double bonds per molecule is not equivalent to the claimed double bond density of double bonds per kg of binder.

E. Before moving on to the particulars of a few specific dependent claims, Applicants note that the Office has referred to an acid number of 0 to 15. This acid number apparently refers to the binder A of Rockrath. However, it is not understood how this is relevant to the

claimed invention, since the acid number of the claimed binder is not a feature recited in any of the pending claims.

F. Regarding dependent claims 3 and 4 specifically, the Office asserts that Rockrath discloses both urethane (meth)acrylates and cycloaliphatic isocyanates. First, Applicants point out that claim 3 recites that “the binder comprises at least one urethane (meth)acrylate which comprises at least one cycloaliphatic isocyanate.” In other words, the urethane (meth)acrylate represents the binder and the cycloaliphatic isocyanate is just a component in the preparation of the urethane (meth)acrylate (see page 4, line 35+ of the specification). In contrast, the cycloaliphatic isocyanates disclosed by Rockrath are not disclosed as components for the preparation of the binder, but instead are disclosed as the crosslinker B that is reacted with the binder A.

G. With respect to dependent claim 7, the Office refers to column 6, line 64+ of Rockrath which discloses that “polymers having unsaturated groups and molar masses of 500 to 100000 g/mol.” However, the Office has again ignored the fact that this disclosure refers to the polysiloxane macromonomer, which is a constituent of the binder A but is not the actual binder A. Furthermore, Rockrath discloses that this polysiloxane macromonomer is copolymerized with other constituents of the binder via radical polymerization (see col. 6, lines 49-53). After such radical polymerization, the copolymer will not contain anymore double bonds. Thus, Applicants again submit that the binder A of Rockrath is not equivalent to the claimed binder as recited in the pending claims.

H. Regarding dependent claim 9 specifically, the Office asserts “Rockrath discloses the [sic] comprises no more than 10% by weight of compound which have only one curable group (column 16, lines 30-34).” Applicants point out that this section of Rockrath that the Office refers to relates to free radical initiators (see col. 16, lines 20-22), and that such radical

initiators, according to Rockrath, do not contain curable groups but instead decompose to yield free radicals.

In light of the foregoing A through H, it is apparent that the Office has done nothing more than find key words and key phrases throughout the Rockrath reference and has pieced them together to suit the Office's own needs without any regard for the context surrounding these key words and/or phrases . In most instances, as described above, the disclosure alleged by the Office to read on a claimed feature has in fact no relation to the claimed component that such a feature is associated with (e.g., Office equates the Tg of one monomer of the copolymerized binder of Rockrath to the Tg of the binder of the claims).

Accordingly, for at least the reasons discussed above, Applicants submit that Rockrath fails to anticipate the claimed invention and that the Office has failed to establish a *prima facie* case of obviousness over the claimed invention in light of Rockrath. As such, Applicants respectfully request withdrawal of this alternative anticipation/obviousness rejection over Rockrath.

II. §103(a) over the combination of Rockrath and Koniger

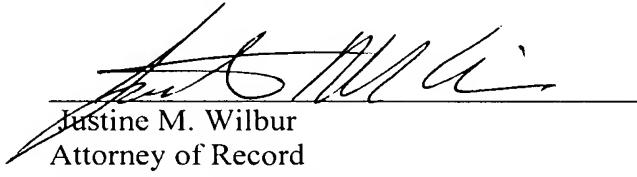
First, it is noted that this rejection only applies to dependent claim 11 which recites a process for the production of laminated shaped articles comprising plastic, wherein the radiation-curable laminated sheet or film of claim 1 is thermoformed and radiation cured. In light of the numerous deficiencies of the Rockrath reference described above, Applicants submit that the combination of Rockrath and Koniger fails to render obvious claim 11 because Koniger fails to fulfill the above-noted deficiencies of Rockrath. In other words, Applicants submit that the combination of Rockrath and Koniger fails to render obvious claim 11 for the same reasons that Rockrath alone fails to render obvious independent claim 1 from which claim 11 depends. As such, Applicants respectfully request withdrawal of obviousness rejection over the combination of Rockrath and Koniger.

III. Conclusion

Accordingly, Applicants submit that all now-pending claims are in condition for allowance. Applicants respectfully request the withdrawal of the rejections and passage of this case to issue.

Respectfully submitted,

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